

# **BIPOLAR ELECTRODE BATTERIES AND METHODS OF MANUFACTURING BIPOLAR ELECTRODE BATTERIES**

## **ABSTRACT**

The disclosure relates to bipolar cells including electrodes surrounding a collector. Embodiments of the bipolar cells include a collector containing a high-polymer material. The disclosure also relates to bipolar electrode batteries containing bipolar cells including a collector body containing electrically conductive high-polymer or electrically conductive particles distributed in a high-polymer. By adding such high molecular weight polymer material to the collector, the weight of the collector may be reduced and the output power density per weight of the battery may be improved. The disclosure further relates to methods of forming collecting bodies and electrodes for bipolar cells using an inkjet printing method. Bipolar cells according to the present invention may be used to fabricate batteries such as lithium ion batteries, which may be connected to form battery modules used, for example, to provide electrical power for a motor vehicle.